

February 20, 2006

State of California Air Resources Board
California Environmental Protection Agency
1001 I Street, 1st Floor
Environmental Services Center
Sacramento, CA 95814

Subject: DRAFT Emission Reduction Plan for Ports and International Goods Movement in California; December 1, 2005

Attachments: "Comments on CARB Emission Reduction Plan for Ports and International Goods Movement in California; (from the) Port of Los Angeles Port Community Advisory Committee AQ Subcommittee"

To whom it may concern,

We appreciate the Air Resource Board's responsiveness to our inquiries regarding the Subject Plan and we respectfully submit the attached General and Specific Comments stating our concerns and recommendations applicable to the Plan as finalized and agreed by the Subcommittee on February 15, 2006. Please note the following immediate recommendation and overview comment regarding our submittal.

- The ARB should implement immediate action to reduce toxic emission from ship propulsion engines, the largest single contributor to air pollution from Port operations; and, lower sulfur fuel which could reduce diesel particulate matter emission by an estimated 50% is available now and can be used in the propulsion engines of a large population of ships currently calling at the Ports of Long Beach and Los Angeles.
- The ARB conclusions in the Plan seem based on assumptions of less trade/port growth, less emissions growth, and/or more emission reduction capability than could be established from information we reviewed. Based on growth projections and emission reduction strategies and capabilities we reviewed to date, we conclude the challenge of reducing emissions from Port operations to levels that are acceptable is a greater challenge than envisioned in the current Draft Plan.

Please also note that we appreciate the years of loyal participation in our meetings on the part of Todd Sterling and the ARB's on-going cooperative efforts with our subcommittee.

Sincerely,

Signature on file

Richard Havenick
Chair, Air Quality Subcommittee of the Port Community Advisory Committee
3707 Parker Street
San Pedro, CA 90731

Copies to: Dr. Ralph Appy, Director Environmental Management, Port of Los Angeles; Board of Harbor Commissioners for the Port of Los Angeles; Port Community Advisory Committee Members for the Port of Los Angeles; Jayme Wilson, Chair, Port Community Advisory Committee for the Port of Los Angeles

Comments on CARB Emission Reduction Plan for Ports and International Goods Movement in California

Port of Los Angeles Port Community Advisory Committee AQ Subcommittee

General Comments:

1. The plan is a good starting point for addressing the pollution caused by goods movement in California. However, as detailed below, more needs to be included to protect the health of residents near goods movement centers and corridors, especially near the major ports.
2. Goals of the Plan: The plan establishes four goals. The first two, reducing emissions to 2001 levels by 2010 and continue reducing emissions past this until attainment of applicable standards (presumably the ambient air quality standards for PM and ozone) are good first steps. However, the third and fourth goals, reducing diesel-related health risks by 85% by 2020 and ensuring sufficient localized risk reduction in each affected community, need to be improved. The 85% target is an arbitrary number apparently based on what particulate traps on engines are capable of. The risk reduction goal should be based on an acceptable level of risk from a health perspective not on what technology might deliver. Likewise, localized risk reduction needs to have a specific health-based target not a vague “sufficient” descriptor.
3. Plan Performance: It is commendable that the plan does assess how it will perform against the goals. However, the plan comes up short (64%) against an inadequate goal of 85% reduction in exposure-weighted risk reduction and is completely silent on achieving the vague community specific risk reduction targets. This shortfall, which translates to 420 unmitigated premature deaths, is unacceptable to local community members severely impacted by goods movement activities. While projecting achieving NOx targets, the plan is vague as to whether the ambient air quality standards are actually achieved in the South Coast Basin.
4. The NNI plan listed 68 measures, that if fully implemented were predicted to achieve 2001 levels by 2009 or 2010, but all of the suggested strategies are not being applied here, so how are 2001 levels achieved? The plan should ensure that all strategies developed in the POLA No Net Increase Plan are considered and applied in the CARB plan. Although Appendix B provides a tabular comparison, it’s not demonstrated that the CARB strategies are “broader and far reaching” than the NNI strategies in all cases.
5. The description of the control strategies is for the most part too brief and cursory. These strategies need to be more thoroughly described to enable the public to adequately assess them. This problem is especially acute with respect to OGV strategies, the largest source of emissions. While indeed challenging for a variety of technical, political and legal reasons, it would seem the largest source of emissions should have the most detailed strategies, not the least.

6. The plan needs to have a better explanation of how air quality standards (presumably for ozone and PM10) can be attained by 2020 and yet how significant health effects, such as premature deaths, still remain. This is a continuing area of confusion and consternation for community laypersons.
7. OGV is the largest source of diesel PM emissions (43% in 2001), is the least fleshed out in terms of strategies, and has the least reduction (21%) in 2020. A target date of 2015 for reduction of ship emission to 2001 levels is unacceptable given the near-term lower sulfur fuel options available for reduction of ship emissions, the fact that 55% of total PM output from Port of Los Angeles operations is due to ships, and due to the significant increase in emissions to which the public will be exposed with container traffic increases of six percent a year at minimum. OGV emissions seem to be downplayed in the plan because their impact is said to be dispersed before impacting onshore populations. This is dangerous given the uncertainties of modeled versus real world impact of transit emissions, the stated importance in the plan of maneuvering and hotelling emissions, and importance of the emissions to increased ozone and PM ambient levels on a regional scale.

Specific Comments:

Chapter I – Public Health Impacts

1. Table I-1: Entries for school absence days (both in terms of cases per year and dollar valuation) seem low, based on our published work for the South Coast Air Basin, which is cited in the report (Gilliland et al, 2001). Jane Hall and Fred Lurmann wrote a manuscript assigning costs to the absences identified as being related to ozone exposure, and the accumulated costs (including lost work time, doctors' visits, medication, etc), for the Los Angeles Basin alone, were over \$200 million per year...so the listed figure here seems like a low estimate.
2. Table I-3: Under respiratory effects, USC investigators (Gauderman et al) as well as European investigators (Brunkreef et al, 1997) have shown decreased lung function in children with increased PM exposure and/or increasing proximity of residences to roadways dominated by diesel truck traffic. Hall et al 2002(?) has published on the ozone-related work-loss costs and assigned dollar valuation estimates to the observed magnitude of losses.
3. Pages I – 2 & 3: The plan refers to 500 avoided premature deaths with implementation of the CARB plan. This statewide number seems to be at variance with the 2200 avoided deaths calculated by CARB in the NNI plan for implementation of the NNI plan through the year 2025.
4. Page I-2: Referring to mortality estimates – To not apply Jerrett et al mortality estimates and approach because it was developed based on LA Basin data is without merit. A major component of the health impacts of the goods movement is felt in the Los Angeles Basin, the approach Jerrett et al applied has been peer-reviewed and accepted, and the data and approach are specifically relevant to the California experience

5. Page I-3, Para 4: The claim is made here that 60% of premature deaths are in the Los Angeles region, with another 18% in the San Diego, San Francisco, and San Joaquin Valley basins. The vast population of California is concentrated in the afore-mentioned basins, so it is surprising that 22% of premature deaths are assignable to other areas of the state...Has this been checked and validated somehow?
6. Page I-5, Section C, Para 1: Into the existing sentence: "...with distance from the sources, risk {insert –“attributable to diesel PM”...}.
7. Table I-4: This table is lacking many other serious non-cancer health effects for the area, some of which are specified in the previous table (I-3). The numbers, costs, and public health imperatives would be considerably higher if these other non-cancer health effects (including cardiovascular disease, premature birth, birth defects, chronic bronchitis, increased respiratory symptoms – and resulting medication and physician care) were included.
8. The following references should be made a part of a new Section VI. References and also, by reference, should be a part of the public record.
 - a. "Sick Of Soot, Reducing the Health Impacts of Diesel Pollution in California", Union of Concerned Scientists, June 2004. UCS conservatively estimated (due to difficulty in quantifying many known health effects) that in 2004 the health care costs from diesel exhaust in the South Coast Air Basin were \$10.241 billion with 1415 cases of premature mortality (page ix figure ES-2). At present, and in 2004, activities associated with the twin ports of Los Angeles and Long Beach are responsible for approximately 25 % of the total air pollution in the South Coast Air Basin, thus in 2004 port related activities were responsible for more than 350 premature deaths and 2.5 billion dollars in health care costs for that year alone.
 - b. "California's Global Gateways: Trends and Issues", Public Policy Institute of California, 2004. The report documents that California is in effect subsidizing economic activity in other states through its failure to recapture the true costs associated with its entrepot status. The report offers suggestions on how to recapture these infrastructure costs.
 - c. "Health Effects of Diesel Exhaust Air Pollution", August 28, 2003. Document prepared by the Air Quality Subcommittee of the Port of Los Angeles Port Community Advisory Committee (PCAC). The document was prepared via a review of the medical/scientific literature to that date regarding health effects that have been related to diesel exhaust air pollution. This extensive list was prepared with input from John G. Miller, M.D., Committee Member, PCAC consultants Professor Avol and Mr. Howekamp, and experts from ARB and SCAQMD in response to requests from the public for a summary of this information.
 - d. "Port-Wide Baseline Air Emissions Inventory, Final Draft, June 2004". Prepared for the Port of Los Angeles by Starcrest Consulting Group. Some information in this report directly contradicts some assertions made in the ARB Draft Plan. For example, Page ES-5 of the ARB Draft Plan states "Trucks are the largest contributor to port related NOx....." and yet

the Inventory (page 26, Table 1.1) "Emissions by Source" documents 6922.7 tons NOX per year from OGV (ships) versus 4463.5 tons NOx from Heavy Duty Vehicles (trucks) in 2001.

- e. "Quality of Life and Port Operations: Challenges, Successes and the Future", White Paper by Thomas O'Brien presented at the Sixth Annual CITT State of the Trade And Transportation Industry Town Hall Meeting August 30, 2004. This report characterizes Southern California, in fact, all of California, as "a donor region when it comes to trade".
9. Page I-7, Para 1: Why weren't the predicted cancer risk isopleths extended out until risk was lower than 10 in a million?
10. Page I-7, Para. 2: It's stated that hotelling and CHE emissions are the largest contributors to cancer risk identified in CARB's POLA/POLB health risk assessment report. However, later on in Chapter IV (page 2), it's stated that "...the community exposure per ton of diesel PM emissions released at sea or on port property is lower than the exposure from a ton of diesel PM released on land within the community." While both statements are true, the plan should clarify or reconcile the two statements, so that readers and local port community members are not mislead that trucks and locomotive present a higher overall cancer risk than hotelling and CHE for residents of nearby communities.
11. Page I-8: It should be noted that the health impact costs and related benefit/cost ratios are conservative since the costs of many of the impacts have not been quantified. Also, concerning the hospital cost approach – was this the same approach used to calculate school absence costs? Inclusion of work loss and wages lost due to parent coverage for absences would seemingly increase the school absence costs compared to what is shown in the report.

Chapter II –Emission Inventory

1. Page II-1, Para.1: The restriction of risk and cost assessment to international import and exposure is an artificial one. The goods movement throughout California involves a significant percentage of domestic goods movement, and depending on the definitions used for "international", could seriously under-predict the impact, effect, and amount of activities on local and regional health and air quality. Some 40% of US cargo comes into the US through the San Pedro Bay ports of Long Beach and Los Angeles, and the movement of these goods to intended markets in Chicago, New York, Kansas City and other locations throughout the continental US must be included in these exposure calculations.
2. Page II-2, Para. 2: This paragraph seems to downplay OGV emissions because "...emissions from ocean-going ships and harbor craft have a longer distance to disperse before impacting a community." As stated earlier, this is inappropriate given the uncertainties of modeled versus real world impact of transit emissions, the stated importance in the plan of maneuvering and hotelling emissions, and importance of the emissions to increased ozone and PM ambient levels on a regional basis.
3. Page II-2, Para. 2: As laid out in detail on page II-12, the emission inventory was calculated separately for transit, maneuvering and hotelling OGV emissions.

- Therefore, the hotelling and maneuvering can and should be specifically displayed and discussed because of their impact on nearby communities.
4. Page II-4, Para. 2: Again hotelling and maneuvering emissions should be spelled out and discussed given their significance to onshore communities as identified in the CARB POLA/POLB Health Risk Assessment.
 5. Page II-6, Para 3: The San Pedro Bay ports are no longer #3 in the world, but are certainly among the world's largest ports, in terms of throughput.
 6. Figure II-7: Again hotelling and maneuvering emissions should be broken out.
 7. Page II-12, Para 5, Last sentence: The assignment of emissions three miles or more from shore has the effect of under-estimating emissions in the basin. Wind flow trajectories and regional photochemistry do not stop three miles off-shore, and doing so in this report, minimizes the impact of a substantive component – ocean-going vessels. Regional effects on air quality (NO_x levels in Santa Barbara County, for example) will be at risk of violation due to emissions of vessels in offshore shipping lanes, yet this three-mile convenience seemingly excludes them from primary consideration. Similarly, over the metropolitan LA region, assigning emissions offshore to continental shelf emissions avoids dealing with regional emissions in the basin, and these emissions must be dealt with here, since they affect the air quality here and are key to attainment of the PM and Ozone ambient air quality standards.
 8. Page II-16, Para.4: Assignment of 21% as the figure for local primary truck trips seems low; has this number been verified by objective data?
 9. Page II-17, Para 2: Why is it assumed that no trips go south? San Diego, Orange County, and other areas would seem to be of some importance...?

Chapter III – Emission Reduction Strategies

1. Page III-9 & 11: The strategy for emulsified fuels identifies NO_x reductions. Given the demonstrated PM reduction for landside sources, shouldn't the potential for PM reductions be listed as well?
2. Table III-3: Even though OGV emissions are the largest source of diesel PM, the OGV strategies are less fleshed out than strategies in the other categories. Table III-3 does not quantify the emission reductions for individual strategies, so it is impossible to compare their relative importance and priority.
3. Page III-10, Para. 5: The PCAC AQ Subcommittee is particularly interested in the potential value of a near-term strategy of using cleaner marine fuels (distillate) for propulsion engines, but from the minimal write-up and listing of implementation issues it is unclear how important this strategy is in the overall CARB plan. Based on new information received by the Subcommittee from an experienced, credible marine engineer employed by a POLA marine terminal, the Subcommittee believes that the majority of ocean going vessels, including recent ships designed to run completely on bunker, could switch to distillate upon entering the coastal waters. According to this source, most, if not all, OGV currently carry enough MDO for fuel switching for maintenance periods and other requirements. These vessels are currently plumbed for fuel switching, which would minimize retrofitting, and their engines are not mechanically damaged or

- impaired by the switching. The Subcommittee specifically requests that CARB include a strategy (using a SECA or direct CARB rulemaking) that requires phasing in the use of distillate in propulsion engines in coastal waters. A recommended approach would be to require the use of MDO <1.5% in the very near term, MDO <0.5% by 2007-8 and MGO <0.1% by 2010-11. This would parallel the requirements recently adopted by CARB for auxiliary engines.
4. Pages III-8 through 15: As depicted in Table IV-4, even with an exposure adjustment for OGV emissions over open water, the risk reduction from OGV is only 53%, which indicates more attention and priority needs to be placed on OGV because of the sheer magnitude of the emissions.
 5. Page III - 29, Para. 3, line 3: Add mobile source emissions (engine-related operations) to the listing of ways of reducing negative impacts to communities.
 6. Page III-40, Para 4: The railroad goal of 65% reductions seems minimal compared to the other progress in mobile source emissions reductions during the same period. Ultimately the major player is, of course, ocean-going vessels, but since trucks and trains are in communities and near the population every day, aggressive emission reductions must be sought from these industries.
 7. Page III – 52-53: The PCAC AQ Subcommittee heartily endorses the statements about the need and importance of early consultation with communities regarding new projects or expansions and new infrastructure.
 8. Table III – 19: It should be noted that under the plan, emissions of diesel PM and SO_x actually increase between 2015 and 2020 which is directly related to the fact that OGV and onroad truck emissions increase in that time period. This bodes poorly for the long-term trend past 2020, especially since major health risk still occurs in 2020 under the plan as currently drafted.
 9. Page III-58: Are the emission reductions of local port authority programs included in the emission reduction calculations?
 10. Page III-60, additional paragraphs – What about the Ports of San Diego, Sacramento, Stockton and the other ports in California? If this is a goods movement report for the state, why aren't the other ports included, discussed, and assessed?

Chapter IV – Benefits and Costs

1. Page IV-3, Para 3: So if the goal of 85% reduction is not achieved, what is the State going to do? How about re-thinking some of these approaches, vis-à-vis timetables for achievement, number of strategies, and make a more aggressive commitment to public health? How is it acceptable to issue a report whose stated objective is to reduce risk by 85%, not achieve it, and just leave it at that?
2. Table IV-4: Again, it would be helpful to break out the maneuvering and hotelling strategies risk reduction since CARB apparently applied very different adjustment factors for these subcategories compared to transit OGV emissions.
3. Page IV-5&6: It should be clearly stated that the health benefits and concomitant economic benefits are conservative, since many other health benefits have not been quantified.

4. Page IV-9: The economic impact modeling seems to only account for the costs of the control strategies. The modeling should also account for positive impacts on firms such as decreased health care costs and insurance premiums increase worker productivity, decreased absenteeism, etc.

Chapter V – Funding Needs

1. Page V-2, Para. 2: The plan makes special note of the high priority for on-road truck strategies. Is this really appropriate in port communities where the plan states that CHE and OGV hotelling result in the highest risk? There should also be caution because in the implementation of the POLA air quality mitigation program (CARB participates as a member of the TAC), on-road truck projects have not been funded because of their relative poor cost effectiveness compared to projects in other categories.
2. Page V-2, last Para: The PCAC AQ Subcommittee heartily endorses the proposal to fund demonstration projects to transfer land-based technology to OGV's because of the importance of OGV emission reductions.
3. Page V-4: The PCAC AQ Subcommittee is highly concerned about the proposal of market-based approaches for implementing this plan. Because many, if not most, of the health impacts are highly localized, trading, basin-wide bubbles, and other such schemes could be counterproductive to protecting local community citizens.